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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 26

Application Number: 09/582,637

Filing Date: October 20, 2000

Appellant(s): OLOFSSON ET AL.

CHRISTOPHER REGAN  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 11/06/2003.

**(1) *Real Party in Interest***

- A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) Status of Claims**

The statement of the status of the claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims 34-63 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) ClaimsAppealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

5357556	DRESSER	10-1994
5799060	KENNEDY ET AL.	08-1998
5870451	WINKLER ET AL.	02-1999
5974115	CHAN ET AL.	10-1999

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6005921	KEEFE ET AL.	12-1999
6014425	BINGEL ET AL.	01-2000
6091713	LECHLEIDER ET AL.	07-2000
6301337	SCHOLTZ ET AL.	10-2001
EP0795977 A2	RYBICKI ET AL.	09-1997

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

**DETAILED ACTION**

***Claim Rejections - 35 U.S.C. § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 34-36, 38, 39, 42, 46-51, 53 and 61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholtz et al. (US Pat# 6,301,337) in view of Dresser (US Pat# 5,357,556) or Lechleider (US Pat# 6,091,713).

**Regarding claims 34, 46 and 63,** Scholtz et al. teaches a combined handset and POTS FILTER comprising of an active splitter circuitry to be connected to a subscriber line for separating analog POTS signals from XDSL signals (see figs. 3, 6, column 1 lines 6-9, column 3 lines 43-50) and line test circuitry (see 70 of fig. 3, and operational circuitry of fig. 6) associated with the active splitter "capable of" (see col. 6 lines 1-7) transmitting a test signal in accessing the *quality of a local subscriber loop*. Even though, Scholtz fails to teach using a unique identity code received during testing and associated with a communication device to identify a loop being tested, it's notoriously well known in the art to use identification codes including ANI or CLI in identifying a subscriber loop which is being tested to determine the quality of the loop/line and to make the necessary changes if needed.

Dresser teaches a system and method for telephone network testing comprising of a testing unit in (see figs. 3-6, column 5 lines 10-13, column 6 lines 37-44) with a serial number identifier or ID unit (18) which can be used to identify a testing unit.

Lechleider teaches generating a test signal any a telephone device (102, column 4 lines 33-42) which goes off-hook from an on-hook state to generate a telephone call to

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a central station and also transmits caller ID or ANI information associated with the subscriber line (see column 5 lines 43-65, column 7 lines 23-47). The test signal would be analyzed by a qualification center or system (190 of fig. 1) in determining whether the line is capable of carrying or supporting digital signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of either one of the secondary references into that of Scholtz thus making it possible to identify a line, loop or circuits being tested, if any changes are to be made to the loop or line based on test results.

**Regarding claim 35,** The combination teaches a test signal specifically meant to determine the quality of a subscriber loop.

**Regarding claim 36,** The combination including Lechleider teaches using a test signal in performing a plurality of measurements, which can then be used in determining whether a line for instance is capable of carrying digital signals (see entire disclosure of Lechleider).

**Regarding claim 38,** see the explanation as set forth in the rejection of claim 34.

**Regarding claim 39,** It would have been obvious to use any testing signal, which can be used for digital testing of a loop or trunk in determining its quality.

**Regarding claim 42,** The combination teaches testing using a pre-determined schedule (see column 13 lines 1-5).

**Regarding claims 47-48,** The combination teaches being able to go off-hook from an on-hook status to generate a remote call including a test signal in determining the quality of a subscriber loop (see Lechleider or Scholtz).

**Regarding claim 49,** see the explanation as set forth in the rejection 34.

Furthermore, the combination of Scholtz and Lechleider teaches the possibility of being able to assess the quality of a subscriber loop including loops capable of carrying digital signals. The user can request testing of a subscriber loop by activating a test telephone including the circuitry as taught by Scholtz from a customer premise to a central office facility. Being able to test a subscriber loop by generating a test signal from a subscriber terminal to a CO (central office) or vice-versa from a central office to a subscriber terminal is notoriously well known. Note that the CO can activate or command the MTU located at the subscriber premise to undertake certain actions and the MTU can itself also perform additional testing using “test tone” as desired in (see col. 3 lines 26-35, col. 6 lines of Dresser).

**Regarding claims 50-51 and 53,** The combination including Lechleider or Scholtz teaches the possibility of being able to perform any desired line test using a test signal.

**Regarding claims 61-62,** The combination including Lechleider teaches being able to assess and store characteristics associated with a subscriber loop for future reference based on a test signal received from a remote station.

3. Claims 40-41 and 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over rejection of claim 34 in view of EP (0 790977 A2, **cited by applicant**).

**Regarding claims 40-41 and 55-56,** The combination teaches analyzing a power spectral density but fails to teach a series of sinusoidal signals of known

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amplitude, each signal in the series having a different frequency, the series spanning a frequency range for which a line is to be tested but EP '977 teaches a method of transmitting a signal with ADSL characteristics which would have a sinusoidal form wherein its power density can be analyzed (see figs. 5, 7, 9, 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of EP '977 into that of the combination thus making it possible to analyze features such as power spectral density associated with the sinusoidal signal.

4. Claims 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over rejection of claim 34 in view of Bingel.

**Regarding claims 44-45,** The combination fails to teach the claimed subject matter but Bingel teaches an apparatus and method for qualifying telephones and other attached equipment for optimum DSL operation by means of an ASIC (110 of figs. 2 and 4-6).

Therefore, it would have been obvious to include the teaching of Bingel into that of the combination thus making it possible to minimize circuitry, an advantage associated with digital processing/testing means.

5. Claims 37, 43, 52, 54 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholtz in view of Dresser (US Pat# 5,357,556) or Lechleider (US Pat# 6,091,713) and further in view of Winkler (US Pat# 5,870,451).

**Regarding claims 37, 43, 52, 54 and 60,** The combination fails to teach the claimed subject matter comprising of being able to use pulse test signals and testing including short-circuiting of a subscriber line.

Winkler et al. teaches a testing system wherein pulse test signals can be used in determining qualities of a loop (see column 9 of Winkler) or testing including short-circuiting of the subscriber line (see columns 5-6 of Winkler).

Winkler et al. teaches testing means, which receives, and stores unique code information (see column 16 line 56-column 17) associated with measurements taken on a subscriber line.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Winkler into that of the combination thus making it possible to identify a line, loop or circuits being tested, if any changes are to be made to the loop or line based on test results by using any known testing methods

6. Claims 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholtz et al. (US Pat# 6,301,337) in view of Dresser (US Pat# 5,357,556) or Lechleider (US Pat# 6,091,713) and further in view of {Kennedy et al. (US Pat# 5,799,060) or Keefe et al. (US Pat# 6,005,921) or Chan et al. (US Pat# 5,974,115)}.

Regarding claim 57-59, The combination teaches being able to identify a testing unit based on a unique identifier transmitted with a test signal for instance but fails to teach being able to send a test signal request to a CO, a notoriously well method of testing a subscriber loop or terminal from a subscriber premise.

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Kennedy or Keefe teaches a method of testing wherein a test signal can be generated at a subscriber premise and sent to a CO for a desired test after which the CO can initiate a test back to the terminal based on receive identification information (see disclosure). Furthermore, the references teach being able to select from one of a plurality of test and performing the test based on the predetermined selection criterion.

Chan teaches a system and method for testing subscriber lines and terminating equipment comprising of requesting a plurality of test after which a test can be performed on the line to determine the quality of the line in addition to services in (see column 8 lines 48-54) during a time interval after disconnection. Chan teaches sending caller identification information or ANI to a central office during a receipt of a test request signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of either of the secondary references namely; Kennedy or Keefe or Chan into that of the combination thus making it possible to determine the quality of a subscriber line or network services by testing the line as such.

#### ***Response to Arguments***

Appellant's arguments filed on 11/06/2003 have been fully considered but they are not persuasive.

(I) The appellant's argued that the prior art of record fails to teach being able to transmit a test signal to test the transmission quality of a local loop based on the

operational circuitry and also, a manual on-premise testing by technician would be incapable of transmitting a test signal.

The examiner strongly disagrees with the appellant's assertion that a manual on-premise testing by a filed technician would not be able to perform testing on a subscriber loop including sending a test signal. A test phone is notoriously well known to have the same functionalities as a telephone thus it can be used to communicate with a remote station (central office) when testing or troubleshooting for instance a subscriber loop. It's notoriously well known to use craftsman handset for continuity testing of subscriber loops and so forth. One of the prior arts of record cited and applied namely; Kennedy teaches that indeed a craftsman handset can be used to communicate with a remote station when testing a subscriber loop. The examiner in rejecting and apply the teaching of Scholtz question whether it would be obvious to incorporate the teaching of being able to incorporate a filter with any test device wherein the splitter would filter out digital signal and the answer is yes. Note that Scholtz renders obvious the possibility of incorporating his teaching in any testing device in (see col. 6 lines 1-7) wherein a test device can use a filtering means to filter out DSL signals during testing. The appellant has characterize the teaching of Scholtz in narrow terms and should be viewed in broad terms to include any testing device capable of analyzing or measuring analog characteristics of trunks, loops and so forth. As noted, any testing device, which needs to reduce digital signal interference when testing, can utilize such a concept taught by Scholtz. For instance, according to Scholtz, the teaching of using a filter or splitter can be incorporated into a TIMS, known in the art as a Transmission Impairment

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Measurement System and standard existing TIMS for instance use dedicated originating and terminating devices to make and take necessary measurements.

Lawrence (US Pat# 4,924,489) even though not applied teaches that a field unit could communicate with an exchange unit.

If the board decides to uphold the appellant's argument regarding Scholtz, the applied secondary references teach being able to send a test signal from one end to the other in addition to a unique identifier, which identifies the source of the test signal.

(II) The appellant argued that the combination including Dresser or Lechleider lack a motivation to combine because there would be no need to transmit a test signal with an identity code using Scholtz's concept.

The examiner would like to point out to the appellant that the teaching of Dresser is directed to a MTU which is connected to a subscriber terminal or premise with its tip and ring in (see fig. 3, col. 1 lines 29-34, lines 40-44, col. 4 lines 49-52, col. 3 lines 26-35) which can interact with a remote local central station and respond to commands sent by the central office and can also send test tone for additional testing to analyze the quality of a subscriber loop. The MTU can send the test signal in addition to a unique identification code for identification purposes, which according to Dresser provides verification and fault report correlation. Furthermore, SEE examples of an MTU (see Adari, US Pat# 5,353,327 116 of fig. 1 or 40 of fig. 2 of Wright).

Another applied secondary reference Lechleider teaches being able to send a test signal in addition to an identification code to a remote facility to determine parameters associated with a subscriber loop

As illustrated by these two references sending identification codes in conjunction with a test signal is not novel.

Thus, if the teaching of Scholtz can be applied to any testing device including technician handsets, TIMS and so forth used in testing and analyzing a subscriber, then the concept of being able to use an active splitter can be applied to any testing device capable of sending, analyzing and monitoring test signals to filter out interference from digital signals. Thus, the combination as set forth including Dresser or Lechleider indeed provides a motivation which for instance can be found in Dresser including being to verify source of incoming test signals for fault report correlation.

In response to applicant's argument that the combination cannot be combined and does not render the claimed subject matter obvious, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the secondary reference provides motivation, which includes identifying the test signal source for analysis of test data.

***Response to Arguments***

Appellant's arguments filed on 04/09/2003 have been fully considered but they are not persuasive.

The appellant's argued that the combination as set forth in the rejection of the claimed subject matter lacks motivation or suggestion to combine.

The examiner has repeatedly answered the question of whether the combination as set forth in the rejection of the claimed subject matter has a motivation to combine.

The combination including Scholtz based in (see col. 6 lines 1-5) can be applied to other testing devices and need not be restricted to solely a potable testing devices. As the examiner has re-iterated during prosecution of the present application, Scholtz teaches being able to incorporate a low pass filter in a testing means for testing purposes except being able to identify a source of a test signal if the test signal is transmitted to a remote station.

Furthermore, as known in the testing art, testing including loopback or call-back testing or verification of subscriber caller ID can be initiated from a testing means and then have a signal sent back to the initiating tester based in part on its identification code such as taught by Kennedy or Keefe applied in claims 57-59.

The examiner supplemented the teaching of Scholtz with that of Dresser who teaches a maintenance termination unit (MTU) which is known in the art to a device

usually located at a subscriber's premise such that a central office facility can initiate testing of a subscriber loop through the MTU. According to the appellant's in (see page 4 of argument), the ID unit is located at the central office; the examiner disagrees because the ID unit is a part of the MTU located at the subscriber's premise (customer location). The MTU has an identification means, which can be used in uniquely identifying a test signal or a source.

Lechleider teaches a testing system wherein a logic device can generate a signal that is sent to a central office facility and identified based on ANI for further analysis in determining whether a subscriber loop is capable of supporting DSL.

Therefore, the examiner believes the combination as set forth in the rejection of the claimed subject matter is believed proper and permissible for the apparent motivation, which includes being able to identify a test source based on the identity code received in conjunction with a test signal for future corrective measures.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the secondary references applied renders obvious the ability of being able to identify a test signal source based on an identity code transmitted with such a signal.

Furthermore, in response, to applicant assessment of Dresser, the examiner would cite references namely

Wright (US Pat# 5,003,586) in identifying how a MTU can be implemented in (see fig. 1) at a customer location.

Adari et al. (US Pat# 5,353,327) teaches a maintenance termination unit in (see 110 of fig. 1 and fig. 2).

***Response to Arguments***

Appellant's arguments filed on 11/06/2002 have been fully considered but they are not persuasive.

The appellant's argued that the combination as set forth regarding the claimed subject matter fails to render the claimed subject matter obvious and furthermore, lacks a combination to combine since the examiner has not established a prima facie of obviousness.

See the explanation as set forth in response to the appellant's argument in the previous office action. (See Response to Arguments, below). Furthermore, the primary reference teaches being able to integrate a splitter with a testing means as a single unit except being able to transmit a unique identifier to a remote station including a CO for identification purposes. Testing devices for testing a subscriber loop/terminal come in many shapes and form including MTU (as taught by 8 of fig. 3 of Dresser) which according to Dresser can communicate with a CO and also, send a test signal to the CO for diagnostic testing, technician handset (Scholtz) or Lechleider (see col. 4 lines 37-40) which teaches a logic test set which can generate a call to a CO for further analysis

from a customer premise. The "concept" taught by Scholtz "active splitter" can be used in any testing device from or at a customer premise including a portable or stationary testing means ie incorporating a testing means with a splitter which can separate analog POTS signals from XDSL signals based on for instance (col. 6 lines 1-7 of Scholtz). On that basis the examiner believes an active splitter incorporating a testing mean can be used in either a portable testing devices or stationary testing +active splitter. The examiner has established a *prima facie* case of obviousness by providing references (Lechleider or Dresser), which teach that the ability to identify a test signal from a subscriber premise by identifying a unique identifier associated with the testing means as being notoriously well known. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ability to receive a unique serial identifier from a testing source as means of identifying the source of a test signal in any testing means including an active splitter with a testing means such as a stationary testing means.

Therefore, the examiner believes that the explanation as set forth regarding the claimed subject matter is proper and permissible.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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PRIMARY EXAMINER

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